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# PLANNING YOUR GARDEN

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EXPERIMENTAL FARMS
SERVICE

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# PLANNING YOUR GARDEN

#### SECTION I

#### DESIGN

Whenever men have had sufficient space and have taken leisure from a struggle for existence they have sought to develop a garden for their private use. In the old days a "guard-in" was an enclosed court within the castle walls where exercise and recreation could be found in safety. As men became more secure they developed land beyond the castle walls but even to-day a garden never satisfies us unless some part of it provides a measure of privacy. Our garden is a place in which we live part of the time and its development must satisfy as many of our needs as possible.

#### CHAPTER I—THE DEVELOPMENT OF DIFFERENT UNITS

In early Canadian times people lived in log cabins. All functions of home life were carried on in one or two rooms. As living became easier, different rooms were developed for different purposes, and the more prosperous life became the more rooms were developed.

The same is true today of the average small city garden. All functions are performed in one area, a grass plot in the centre, clothes-line down one side, garbage cans by the back step, a flower border beside the garage and a vegetable strip along the back fence. Things are in their place, it is neat and the best we can do under the circumstances.

But as families become more prosperous rooms increase. Special rooms have been developed for special functions: each has its own characteristics; each is designed and decorated to create a definite impression of its own. Yet, if the scheme is well planned by architect or owner, all the rooms will fit together to give the impression of convenience and relation to each other that we call unity. This is brought about not only by the convenience of arrangement, but by similarity in decoration, by frequent use of similar materials and a governing idea which we call "motive" running through the whole scheme.

Gardens have developed similarly though their progress has lagged behind that of the interior. Landscape architecture has usually been associated with large properties and bulging pocketbooks. Yet, if we consider it as the planning of land for human use and enjoyment, it would seem to be more necessary on small properties, where space is at a premium, than on large ones. The pleasure with which we will view the finished development of any property will depend on the way in which its arrangement appeals to our aesthetic ideals, coupled with our appreciation of the practical use to which the land has been put. To accomplish this requires a lot of thought and the first question we should ask ourselves is "What do we want our garden to give us?"

#### What Do We Want?

If we think of the whole property as a system of parts arranged so as to provide the most suitable living accommodation for the family, it will help us plan the grounds as outdoor living rooms. In order to plan the area adequately

we must think of the things we want to do in it and how it can be most conveniently arranged to facilitate their being done. If the family likes gardening, there must be ample space for flowers, even at the expense of lawn (see figures 3B and 3C). If outdoor games are popular, then the lawn will predominate (see figure 3A). But if the preference is for reading or tea, flagstone areas to hold chairs and tables will take the place of lawn, and shrubs will replace flower borders as they require less attention. Do we want a kitchen garden, space to hang clothes, or a play area for the children? How can we use all of our property to make family life more complete?

# Start on Paper

When we have considered these points carefully and know what we want to achieve we can start to plan our garden. Of course, it should be planned out on paper first until we are satisfied with the arrangement before we attempt the actual work.

Planning saves time and labour of making changes after the work of planting is done. But, in planning, one must be sure to draw objects according to scale, otherwise the plan will not work out when we try to carry it out on the ground.

The first step is to mark down on the paper the boundaries of the property, the location of existing buildings, large trees, poles and other fixed objects. The slope of the ground and the compass bearing will also need to be kept in mind (see figure 1).

# Placing the House

On the small city lot, there will be little choice as to the location of the house. It should be as close to the street as building restrictions will permit, in order to leave as large a space as possible at the rear. Usually it should be placed as close to the north or east side of the lot as practical arrangements will allow, so that the maximum amount of light may be obtained on the south and west sides, where the living and dining rooms will be located. Often, of course, the slope of the land, or the proximity of neighbouring buildings will alter this plan.

On larger properties the house should be placed toward the east or north side; so that the garden areas can be arranged where they will receive the most sunshine. The old practice of placing the house in the middle of the lot wastes space and makes convenient planning difficult.

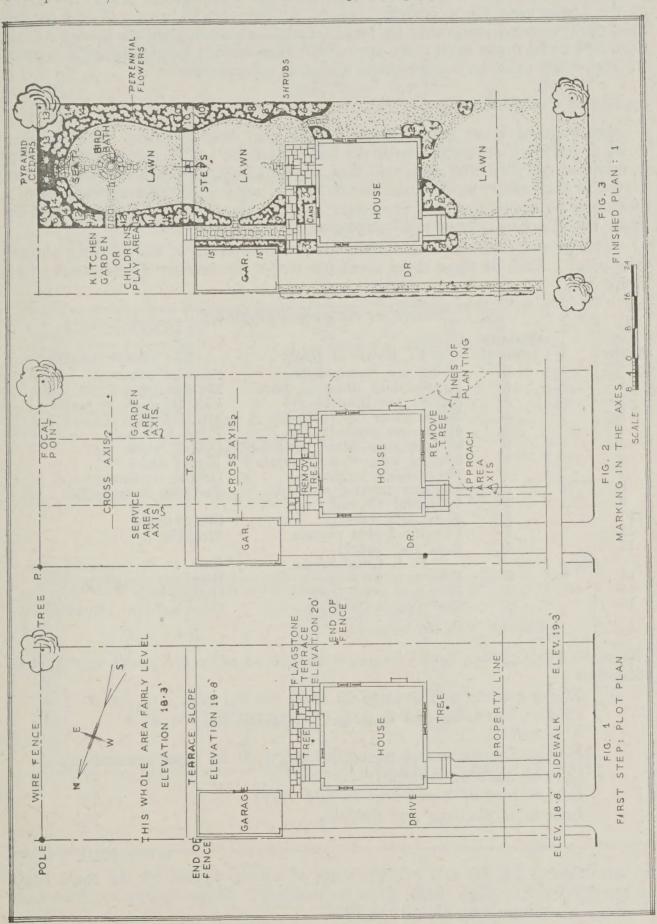
Farm homes or country houses should be placed on fairly high land to obtain good drainage and also because the house appears to better advantage when the approach to it is up a small rise. If possible, they should be fairly close to the main road—about 100 feet—for purposes of convenience, and the farm buildings should be situated 200 feet or more away, in such a position that the prevailing winds will carry the odours away from the house.

# Divisions of Area

All properties, regardless of size, fall into three divisions: (1) approach, (2) service area, (3) recreation or garden area. On large properties these areas will be more complicated and subdivided into small areas for special purposes. But the main divisions are always the same.

In order to bring unity into the arrangement of the whole property, these areas should be intimately related to the house and to each other. This is best accomplished by planning each area around a central imaginary line which is

called the axis. This is really the line of vision from the house along which that area will be viewed most often, or it may be the line from the garden along which we will most frequently view the house. For example, on most properties the approach area will usually be seen by people directly facing the front door or leaving it, so that the arrangement should be balanced around that line, whenever possible, in order to create the most pleasing picture.



The service area, for practical purposes, will be directly connected to the kitchen or service entrance or with the view from the kitchen window.

The garden or recreational area will be most frequently seen from some door or window of the living room of the house which overlooks this part of the

property (see figure 2).

As the rooms of a house are separated by walls which define the areas of the house used for a certain purpose, so the various areas of the garden need division from each other by fences, hedges or other planting to mark their boundaries and make each more apparent. Because our minds dislike confusion we appreciate each area more when we see it separately.

# System of Circulation

By building these garden parts around the lines of vision each appears to be in intimate connection with the house and the whole gains in unity. If, in addition, we plan the garden so that its various parts are conveniently connected to each other, we increase this feeling of unity. The best appearance can be gained by development of secondary axes, or lines of view along connecting paths which are usually at right angles to the main axis.

This gives us the skeleton around which development of the property should take place. Each of these three areas must now be considered separately, (see figure 3).

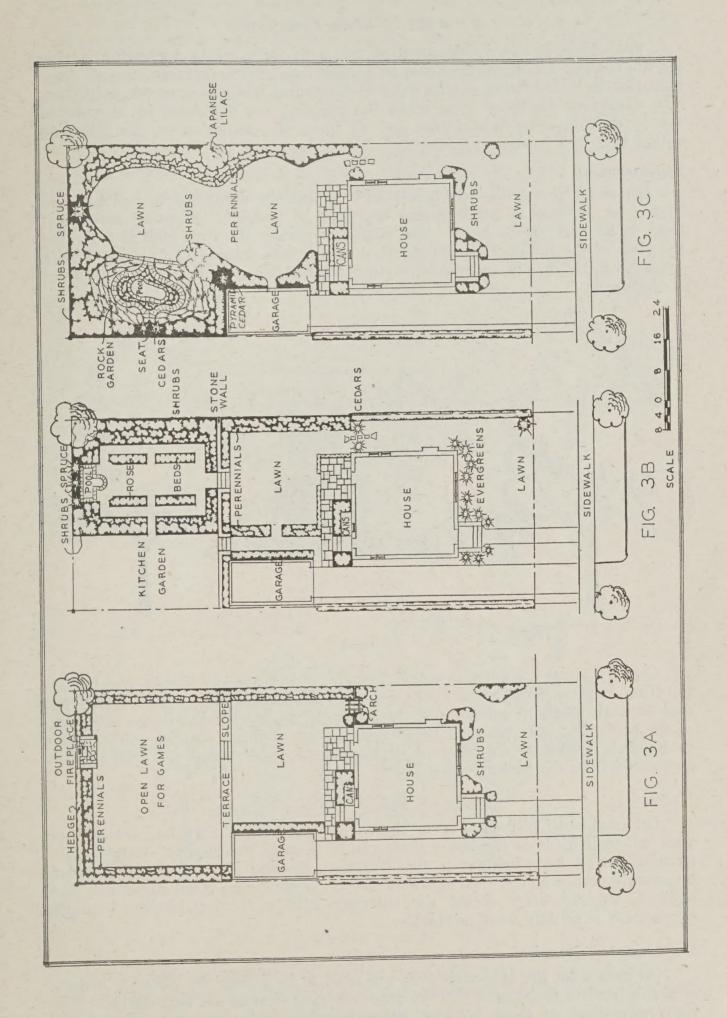
#### PLANTING KEY FOR FIGURE 3

Key number  1 2 3 4 5 6 7 8 9	Quantity required 2 3 5 5 1 2 4 2 2 3	Botanical Name Thuja occ. pyramidalis Philadelphus Bouquet Blanc Spiraea van Houttei Philadelphus Glacier Hydrangea paniculata gf. Syringa vulg. Mme. Lemoine Syringa vulg. Pres. Fallieres Philadelphus Virginal Lonicera tatarica speciosa Viburnum Carlesii	Common name Pyramid cedars Mockorange 3 ft. Van Houttei's spiraea Mockorange 5 ft. P. G. hydrangea Double white lilac Mauve lilac Double mockorange 6 ft. Tartarian honeysuckle
10	5	Kolkwitzia amabilis	Beauty bush
11	3	Diervilla florida venusta	Weigelia
12	4	Rosa rug. hybrid F. J. Grootendorst	Rose F. J. Grootendorst
13	3	Viburnum trilobum	Highbush cranberry
14	4	Forsythia ovata	Golden bells
15	2	Rosa hybrid Doublooms	Climbing rose Doublooms
	Together w	with 100 perennials	

The cost of this garden would be about as follows after the rough grading has been done:

Finish grading and sodding 30 cents per sq. yd\$	90
Cost of manuring and digging borders 145 sq. yds. at 40	
cents	58
Cost of flagstones and laying 204 sq. ft. at 25 cents	51
Cost of planting material	
Cost of bird bath and seat (would vary)	
Labour of planting and finishing	15
\$3	10

See also figures 3A, 3B and 3C, the costs of which, figured on the same basis as above would be \$295, \$495, \$419 respectively. These figures are based on the costs of materials and labour in 1939.



# CHAPTER II—THE APPROACH

The object in the development of this area is to create a pleasing setting for the house. All planting should be subservient to it; arranged so as to draw attention to it and bring out its good architectural features or mask ugly ones. The dangerous tendency is to make the planting too elaborate by the use of too much colour or rigid forms and so focus the attention on the planting rather than the house.

Enframement

On small properties the house will completely dominate the picture, so that it is not wise to attempt any diversion of interest. Planting here must seem to be part of the house. On larger properties the first step is to frame the view of the house from the street, or road, with masses of foliage. Where space permits, this is accomplished by planting trees to the front and sides of the house.



FIGURE 4

On city lots we must be content usually with groups of shrubs planted at the front corners of the house. As a general rule, these foliage masses should be mid or dark green in colour, and should be in scale with the house and size of the property. Any plant of spectacular colour or form, such as golden elder or Koster's spruce, is entirely out of place here as it makes the frame more noticeable than the picture.

#### Drive

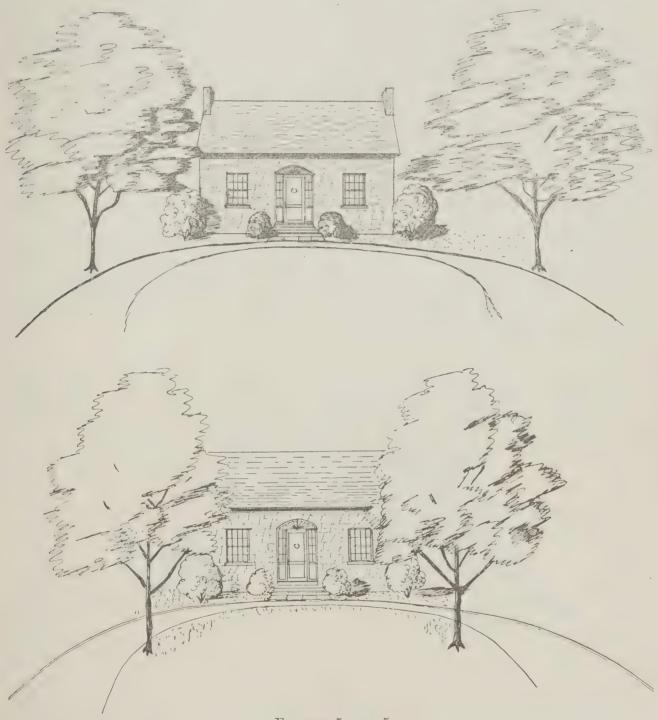
On good sized city lots, or in the country, the drive may be part of this area, where it leads to the house itself rather than to the garage. Large semicircular sweeps were popular in the Victorian era and are sometimes in order but usually cause a good deal of waste space. If the house is set sufficiently far back, a straight drive facing the entrance with a turning circle of ample proportions is usually more advisable.

# Definition of Boundaries

On such a lot the approach area will need to be defined by planting hedges or shrub borders to prevent the eye from straying beyond its boundaries. The converging lines of these borders, either straight or in sweeping curves, will lead the eyes to the house enframed by the masses of foliage mentioned earlier. Such planning, by limiting the lateral view, tends to lengthen the apparent distance of the house from the street, whereas any line which cuts across our line of vision, such as a hedge or the slope of a terrace, tends to make the house appear closer to us. This may or may not be desirable according to the proportions of the property.

# Planting Alters Proportions

Planting can do much to modify the proportions of the house and size of the lawn. Houses can be made to appear wider, when the enframing masses of foliage are set just clear of the front corners (see figure 5).



FIGURES 5 AND 5A

Wide houses are improved by moving these foliage masses closer together so as to hide the corners (see figure 5A), and by breaking up wide, bare wall spaces by planting tall, erect growing shrubs.

Any planting in the centre of a lawn makes it appear smaller by focusing attention on the planting, which detracts from the general picture. Small areas can be enlarged apparently by the use of small shrubs and trees which have fine foliage and slender twigs grouped around the boundaries. Conversely, large areas appear smaller when large shrubs of heavy appearance, such as lilac and hydrangea, are used.

# Foundation Planting

These side plantings and framing masses of foliage lead the eye to the house. The house is further set off, and attention drawn to its attractive features, by the planting at the base of the walls, which is known as foundation planting.

Herbaceous perennials are not usually suitable subjects as foundation planting because their shapes change too much from season to season. They seldom have sufficient mass to be adequate and their main attraction is in a short season of bloom which often distracts attention from the house. A neat flower garden often suits the dooryard of a small cottage, but shrubs or horticultural varieties of conifers are generally more suitable for most houses.

The house usually appears to better advantage when only a few shrubs are placed at strategic points, such as the corners, on either side of entrances, or against broad wall spaces. But where high foundations or broad, high verandahs exist these are better hidden by continuous planting of loose growing deciduous shrubs such as spiraea, honeysuckle, etc. (See figure 4).

Here, again, shrubs which have mid-green foliage are more suitable than golden, variegated or red-leaved varieties. The main dangers, however, are over-planting and placing the small new shrubs too close to the building so that they have no chance to develop into their natural, graceful shapes. A shrub, such as the commonly used spiraea van Houttei which should be allowed to grow five to six feet high, should never be planted less than three feet from a wall or four to five feet from a path.

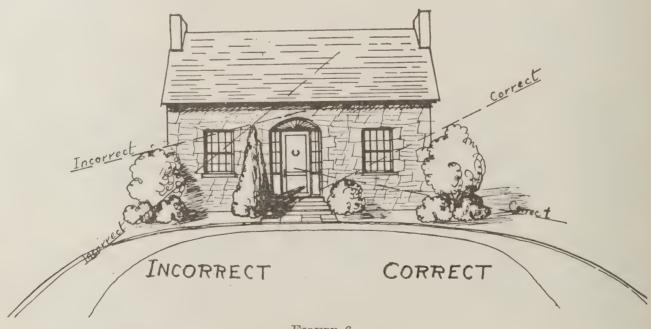


FIGURE 6

Houses with good architectural lines are improved by the use of shrubs or varieties of small evergreens which have definite shapes and dense texture. Such plants because of their set form attract attention and lead the eye to the points of interest in the house. Unfortunately, because of the popularity of these small evergreens they have often been used in situations where deciduous shrubs

would be more advisable. Also, people have tried to create the same effect by using plants of the common native cedar, pine and spruce, which all grow much too large and need to be removed in a short time.

The ultimate height of plants used in foundation planting is very important as it determines the way the eye will travel. Tall, erect or pointed forms lead the eye upwards and break up wall spaces, so adding to the apparent height. Low, squatty or domelike forms pull the eye downwards to emphasize width. Loose spreading masses merely fill in space and soften the appearance.

The eye travels from the top of one plant to the top of another and creates imaginary lines across the face of the building. These should lead to points on which we wish to focus attention, such as the front steps or the centre of the front door (see figure 6). Plants of wrong heights may focus attention at the wrong points or merely create a jumble of vegetation without character.

#### Texture and Colour Harmonize

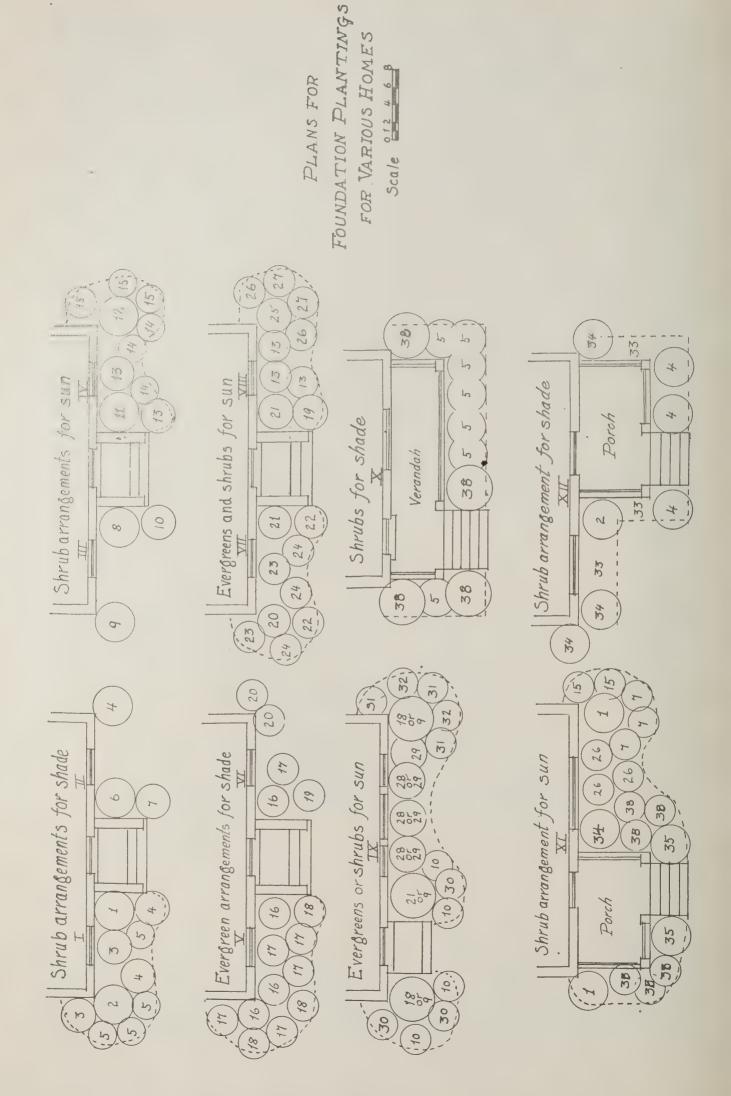
Texture and foliage colour of shrubs can also be used to lend emphasis to a certain spot. Variegated, golden or red foliage will stand out against the darker green of other shrubs and hold attention. A large leaved or coarse twigged shrub will stand out boldly against a less distinct background of smaller foliage. Profuse bloom—particularly of light colour—always commands attention and may temporarily spoil the whole effect of the planting. For this reason proper height, habit of growth and good foliage are more important than bloom alone, on which basis shrubs have usually been chosen in the past.

It is, of course, impossible to take up a definite planting scheme which would be suitable for all homes. This discussion, coupled with a study of the plans 3, 3A, B and C, and their descriptions later, may, however, help in the planning of the reader's property.

#### PLANS FOR FOUNDATION PLANTING

The plans on the following page suggest several treatments for foundation planting of a few typical houses. In all cases showing a centre door, alternate treatments are suggested. In actual planting each side should be planted alike. For this reason quantities in the key are doubled in such cases, see plans I-VIII.

Arrangements of tall shrubs should be used where the house has a high foundation; low shrubs suit a low set house.



# KEY to PLANS FOR FOUNDATION PLANTINGS

KEY to	PLANS F	OR FOUNDATION PLANTINGS
Plan I. Tall Planting of S	hrubs for	Shade
Key Qua		
1		Lonicera tat. Carleton
$\stackrel{-}{2}$	2	Viburnum Opulus sterile
3	4	Symphoricarpus albus
4	4	Hydrangea arborescens
5	8	Berberis Thunbergii
Plan II. Shrubs for Shade,	Low	
6	2	Sorbaria sorbifolia
4	2	Hydrangea arborescens
7	2	Spiraea Anthony Waterer
Plan III. Shrubs for Sun,		Q *: TT
8 9	$\frac{2}{2}$	Spiraea van Houttei
10	$\frac{2}{2}$	Philadelphus Bouquet Blanc Rose Katharine Ziemet
	_	Trose Traduatine Ziemet
Plan IV. Shrubs for Sun,	2	Philadelphus coronarius aureus
12	2	Syringa vulg. Mme. Lemoine
	4	Berberis Thunb. atropurpurea
14	6	Weigelia Eva Rathke
15	6	Forsythia ovata
Plan V. Evergreens for Si	hade, Tall	
	6	Taxus cuspidata erect
17	10	Taxus cuspidata spreading
18	4	Pinus mugo Mughus
Plan VI. Evergreens for S		
16	2	Taxus cuspidata erect
17 19	$\frac{2}{2}$	Taxus cuspidata spreading
20	4	Thuja occ. Little Gem Chamaecyparis pisifera filifera
		Chamacey paris pishera innera
Plan VII. Evergreens for 20	2	Chamaecyparis pisifera filifera
21	$\tilde{2}$	Thuja occ. pyramidalis
$\frac{1}{22}$		Chamaecyparis pis. plumosa aurea nana
23	4	Juniperus sabina
24	6	Juniperus sabina tamariscifolia
Plan VIII. Evergreen and	Shrubs (	Combined
21	2	Thuja occ. pyramidalis
19	2	Thuja occ. Little Gem
13 25	6 2	Berberis Thub. atropurpurea
$\frac{25}{26}$	4	Thuja occ. wareana Juniperus squamata Meyerii
27	4	Potentilla Farrari
Plan IX. Evergreens	-	
18	2	Pinus mugo Mughus
21	1	Thuja occ. pyramidalis
28	3	Juniperus chin. Pfitzeriana
Plan IX. Shrubs as Altern	native to	
9	3	Philadelphus Bouquet Blanc
29	6	Rose Betty Prior
10		Rose Katharine Ziemet
30 31	$\frac{4}{3}$	Rose Orange Triumph Rose Snowbank
32	2	Rose Firefly
Plan X. Shrubs for Shade	del	
38	4	Spiraea arguta
5	10	Berberis Thunbergii
Plan X1. Shrubs for Sun		
1	2	Lonicera tat. Carleton
$3\overline{4}$	1	Viburnum carlesii
35	2 3	Philadelphus Belle Etoile
26		Philadelphus Bouquet Blanc.
38	6	Spiraca Anthony Waterer
7	3 20	Spiraea Anthony Waterer Pachysandra terminalis
33	20	Pachysandra terminalis

# CHAPTER III—SERVICE AREA

The service area, as mentioned in Chapter I, is usually located to the east or north side of the property next to the service side of the house. The parts of this area will be grouped around a central axis where possible, which connects it with the kitchen window or service entrance.

Divisions—Economy of Space

On most small properties the service area is comprised of the drive, garage and space for hanging clothes and parking garbage cans, with possibly a small kitchen garden. On larger places, space for stables, kennels, cold frames, small fruits, etc., may need to be provided. This is the practical area where maximum convenience and production are required usually from a minimum of space and labour. Therefore, careful planning is essential in order to utilize every square

foot of space to best advantage.

As an example, many owners of small lots are deprived of a kitchen garden because the garage has followed the old rule for horse stables and been placed at the back of the lot. Had it been moved further forward the space behind would be available. By careful planning one can often use the same area for two purposes, such as a combination of kitchen garden and garden for the growing of cut flowers, by planting flowers around the boundaries and as borders for the paths in the kitchen garden. Kentucky Wonder beans are quite good to eat and make good vines for hiding a fence or garage.

Divisions between different parts of this area will be needed to shut them off from view from the main part of the gardens and give them definition. These divisions will need to be narrow to conserve space and steps. Lattice or wire fences, on which vines can be grown, or tall clipped hedges, are most suitable. Paths should be narrow and preferably of flagstone or gravel as these require less labour to maintain than grass. They will run in as direct a route as possible in order to save steps and link the whole area closely together. The parts used most often should be situated nearest to the house.

For convenience, as well as giving the impression of unity, these paths should be connected with the garden areas so that one may walk easily from one to the other and the arrangement is most logical when these paths take the position of secondary or cross axes. A study of the plan in figure 3 may help

us to consider some of the details involved.

Starting with the drive, on small properties it should take the most direct route to the garage and where curves are necessary they should be on a radius of at least 25 feet. A single drive should be 8 to 10 feet wide, or 16 to 18 feet for two cars to pass. The surface should be of some hard material, such as concrete or asphalt paving, which will not track into the house or scatter in the grass. Cinders, stone dust and gravel are objectionable for this reason.

In order to conserve space, the garage should be as close to the street as is consistent with good appearance. Where the garage is attached to the house, it and the drive must be considered in the approach area and the boundary planting will usually take the form of a hedge or shrub border along one side of the drive. In Canada we rarely plant along both sides of a drive because of the difficulty of snow removal.

# Drying Clothes

Next come facilities for drying clothes and taking care of garbage cans both necessary at any house but rather unsightly. For convenience they should be located close to the service entrance and, where possible, hidden by lattice fences or tall shrubs. On the average small city lot no separate area can be provided, but convenient clothes lines can be arranged which will interfere with the beauty of the garden as little as possible and it is usually possible to arrange a space for cans which can be hidden by a shrub or two.

# Kitchen Gardens

Kitchen gardens must be placed where there is plenty of sunshine. They may be simple, bare rectangles in which vegetables are grown or may be more formally planned with grass paths and margins of flowers, as desired. On most small properties they should be situated at the far end of the service axis from the house so that there will be less likelihood of earth and mud being tracked into the kitchen.

# CHAPTER IV—THE GARDEN AREA

Class

With leisure and prosperity, the development of the garden has been similar to the development of the house. The main areas of the grounds as previously mentioned have become sub-divided into various units for special purposes. So we have part of the service area set aside as a kitchen garden and a second part for drying clothes, while in the garden area we may want a rose garden, an outdoor sitting room, a wild flower garden and a lawn for games. Each is a garden of a different "class" according to the purpose for which the particular area is set aside. So the class of gardens we require will depend on the various needs we want our gardens to meet. On very small properties, we cannot have many separate areas, but in larger schemes sub-division of the main areas makes the whole scheme more interesting and the use of the particular area more apparent and consequently more satisfying.

Style

Just as fashions in architecture and interior decoration have changed from one country to another and from one period of time to another, so "styles" in gardening have changed. There are English (style) flower gardens, or French parterres (flower gardens), Colonial gardens and modern ones. Space here does not permit a discussion of the differences in these styles. They were developed by the people of a country or period to meet their particular conditions of climate and social needs. The French parterre catered to the desire for fine architectural detail and formality that appealed to the nature of French people. The Spanish patio provided an intimate, restful spot for the mid-day rest period, necessary in the climate of Morocco where this style originated.

The style of our gardens will be dictated largely by the architectural style of our house, coupled with personal tastes. But above all it must be suitable to the climate and provide the proper setting for the purpose for which that

part of the grounds is to be used.

Canadian Style

In Canada we are gradually developing our own style. At the present time it follows the American development very closely, but with less attention to garden ornaments and funishings. Due to our more prolonged winters and the ease with which most of us can get to the country in the summer we have not furnished our gardens for comfort in the past but have used them for the children's play and as an exercise ground for our horticultural hobbies.

Of recent years, however, more attention has been paid to garden design and the arrangement of garden areas for comfortable living. We are combining the English love of flower gardens with our own love of nature and taking advantage of a wealth of trees and shrubs. We are making liberal use of conifers to provide green during the long winters and of bulbs for spring bloom. We are accustomed to space in Canada so that simple, open arrangements of parts is more appreciated, even in formal work, than any of the more crowded European styles with their fine detail. We like games so need open lawns. We must shovel snow so leave our planting well back from roads and paths. In the

East we have quantities of good limestone, so we prefer it for walks, steps and walls to the finer finish of brick or concrete. Because these things suit our climate and tastes, it is generally the wisest policy to use this style in gardens in which we wish to live though show places are often very effective when carried out according to the styles of other countries and periods.

Type

The people of each country and period have wished their gardens to express different degrees of formality, which we call "type". So at one extremity we have gardens of formal type and at the other naturalistic type. But because people do not like formality at all times and because in small places dominated by buildings and rectangular boundaries it is almost impossible to imitate nature closely, we have had to develop intermediate types of varying degrees, which we might call conventional and informal.

#### Formal

Formality in gardens of all countries and any period is characterized by (1) level areas with any difference in grade brought about by means of set retaining walls and steps, (2) symmetrical arrangement and geometric shapes of parts, (3) strong colours in contrasting arrangement, (4) a general fineness of texture, finish and architectural detail, (5) planting of the individual beds is kept well below eye level so that the symmetry of the design is not disturbed and is purely for the purpose of ground decoration. This is particularly the case in the French parterre and in English gardens of the Tudor period.

Our eye in such a garden is carried to the focal point on the axis by the convergence of straight lines, the repetition of similar forms, or the rhythm of

alternating forms at regular intervals.

Contrary to a great deal of popular opinion, this type is most readily appreciated because its design is more obvious and showy. It is more readily carried out successfully, as symmetry is more easily accomplished than the more subtle balance of interest of good informal work.

#### Conventional

The conventional is a modification of the formal. Obviously we cannot imitate nature successfully on a small lot surrounded by rectangular forms. Yet we do not wish the symmetry and fine detail of formal work. So a type has developed common to most neatly kept city lots. This has on open lawn, straight edged flower borders, an attempted balance of interest on either side of the axis. Also the axis should end in a focal point of interest (see figure 3A).

#### Natural

The truly naturalistic type can only be carried out on fairly large properties where space permits us to get far enough away from the house or other artificial features so that the garden is not dominated by them. It is characterized by large, open lawns with trees and shrubs grouped loosely around the margins in much the same manner as scrub growth and trees outline a pasture field that has been cleared from the bush. Or it may take the form of natural brooks and ponds, outcrops of rock from a hill-side, wild flowers beneath forest trees or any imitation of nature.

# Informal

A modification of the natural and the type more commonly used on small properties is the informal. This is characterized by (1) undulating lawns open in the centre with the planting grouped around the boundaries (2) balance of interest on either side of the central axis rather than symmetry (3) sweeping curves and varied skyline.

In informal work an axis exists but only as an imaginary line ending in the focal point. The impression of this line is only given when the balance of interest on each side of it is carefully maintained. This does not mean symmetry. A small pyramidal tree of dense habit may balance a much larger spreading tree with lacy foliage, or a large clump of average shrubbery may be balanced by a single golden leaved specimen.

The focal point may be a garden shelter for serving tea, a bench or sundial, or simply an opening for further interest beyond. It must be the most inviting feature, with all other planting in this garden unit leading our eye up to it by the sequence of logical progression along the sweeping curves of the boundary plantings. No unit of interest along this line of progression should be so arresting as to command a full stop, though the whole line of the planting should be made up of interesting group pictures.

# Varied Skyline

The promontories in these sweeping borders may be bold frames for the interesting bays between them. Each shrub group and each bay should be carefully thought out as it will look in perspective and arranged to create a pleasing composition. There will be points where we require boldness and increased height in the skyline. Here we use small trees or large shrubs of dense appearance and coarse texture of foliage which we call "dominant" because their height and texture make them stand out above their fellows. The centre of interest in each of these small pictures will usually be low growing plants of often horizontally spreading habit, or some other particularly attractive feature at some season. These we call "interest" plants. These are backed up and flanked by more average sorts which we call "fillers", whose function is as a foil, and connecting link for the other two (see figure 7).



Fig. 7. A Perspective View of Fig. 3A

# Harmony or Contrast

In all good shrub grouping in informal work harmony is the rule, contrast the exception; harmony of form, colour and texture of foliage with strong contrast of form and texture used only at strategic points. Foliage colour should blend gradually with the bright, warm greens near at hand followed by dark green, blue-greens and grey-greens farther away. This will give the impression of added distance.

Texture

Texture, too, may be used to create illusions of distance or over-emphasis. Large foliage and coarse twigs are seen more clearly than fine foliage and twigs and consequently appear to be closer to hand. For this reason large shrubs of coarse texture make large spaces seem smaller and fine textured, small shrubs make spaces seem larger. A coarse shrub at the front of a border of fine textured shrubs will stand out very distinctly while fine shrubs backed by coarser ones will appear flat.

Massing

In all informal work masses of similar shrubs will prove infinitely more satisfying than a jumble of individual specimens of a number of varieties. This is particularly the case in plantings seen at some distance. Our real pleasure in viewing a composition depends on the harmonious relation of the individual interests, not on its thoroughness as a horticultural collection.

Propriety

As well as being related to each other by main and secondary axes, the parts of our garden must be properly related to each other in method of treatment. Although different parts are desired for different purposes and so must be developed differently and although there must be sufficient variety to prevent monotony, there must be common bonds of style and similar materials and textures running through the whole composition to give unity and a feeling of propriety.

Our eye only sees a small section at any given time, but we can turn our heads so rapidly that we can retain a mental picture of the whole garden part and are immediately conscious of any incongruity. Even when we pass from one part into a second, from which the first cannot be seen, we retain its mental

impression and find too great a change displeasing.

With regard to style, there must be the consciousness of a common character running through all the unit parts. For instance, while it is permissible to walk from the quiet symmetry of an English flower garden into the open informality of the undulating lawns and sweeping curves of shrubbery of park planting, it would seem entirely out of place to walk from the same garden into the spacious grandeur of the French chateau style. Even with two types—formal and informal—of the same style, it is not advisable to be able to see both at once without some definite barrier between, such as a hedge, shrubbery, etc., through an opening in which we pass from one to the other.

Similarly, of course, any changes of style or type within the same area are definitely damaging to the peace of mind with which we view it. So, also, to a less degree is difference in class. In small areas it is often necessary, for instance, to combine rose garden, water garden and flower garden into one picture (see figure 3B), but the picture always lacks the definite character that

a garden confined to one of the three classes mentioned would possess.

Continuity

Unity is further brought about by the repetition of similar materials, colours and textures in the different parts. Boundary plantations of shrubbery enclosing the whole area and separating one part from another tie the whole together very satisfactorily. A good system of paths connecting one part to another so that steps do not need to be retraced helps the feeling of continuity, particularly if the paths are of some one material, such as grass or stepping stones. One kind of shrub occurring in the planting of several parts of the garden will help link the whole together and lend it character.

These are the principles we must keep in mind in thinking of the various units in detail. While it is impossible to provide sets of plans to meet the needs of different families and properties a consideration of the way in which different plant materials are used in figures 3, 3A, 3B and 3C may be of assistance to the

reader in the actual arrangements of his own property.

#### SECTION II

#### PLANT MATERIALS

CHAPTER V—THE USE OF DECIDUOUS TREES AND CONIFERS IN GARDENS

Trees are used in the development of gardens in many different ways, particularly on large properties where economy of space is not so important as on city lots.

#### Street Trees

In city or country places the first trees of which we think are those which line the sides of streets or roads, and by their continuous repetition create the impression of greater length. Any divergence from a single type of tree or any variation in planting distance breaks the repetition and so spoils the illusion of length. Trees for this purpose must be of good symmetrical form and must be planted at sufficient distance apart to permit their full development without crowding or producing too dense a shade. Most city trees are planted much too closely together and too near houses to permit proper appearance of the tree or to allow for the development of lawns or other plants. One must remember that, though small and casting insignificant shade at the time they are planted, trees rapidly develop to the point where their roots require a considerable area of soil in which to feed without competition.

Street trees must be hardy enough to withstand the local climate and capable of maintaining healthy growth in smoky, crowded atmosphere. Finally, as in the case in the selection of all shade trees, they must be as neat as possible in the matter of shedding seeds or other material which would litter streets and drives

It will be noticed in the plans (Figs. 3-3C) that on these city lots all trees in front of the house are planted in the parking strip between street and sidewalk. This is advisable as it places the trees at a considerable distance from the house and makes possible more uniform planting of street trees under the supervision of the municipal authorities. Where each lot owner plants his own trees of different sorts and at varying distances confusion results.

It will be noticed further, that the trees in the plans are planted on the property lines between lots, which in this case places them fifty feet apart. This is close enough for trees of the kinds commonly used.

In Eastern Canada trees which have proved most useful in filling these requirements are the hard or sugar maple, the Norway maple, the European linden, the red and white oaks—though these are rather slow in growth—and the American elm. The last is excellent where space permits but is too large for most city streets. In the North and West, where the climate is more severe, the Russian poplar, white birch and green ash are suitable trees for street use.

# Windbreaks

Exposed home sites, such as farmsteads or suburban properties, often require rows of trees to act as protection against wind. Here the need is for rapid growth of dense character. The exposed position naturally demands the utmost hardiness and, because the planting is close, no particular thought need be given to the shape of the individual tree so long as the mass is effective.

#### Screens

The same requirements are necessary where trees are used to shut off the view of unsightly objects, or to form a background for the more colourful displays of the garden. In the country or on suburban properties poplar, willow, ash, pine and spruce trees are preferable in such situations. In the city there is not usually room for trees larger than Chinese elm or the native cedar; on small lots screening is usually done with shrubs or single trees of more attractive form (see fig. 8).

# Enframement

As we have seen in Chapter II on the approach area, trees on larger properties are used to frame the view of the house. Similarly, the view from the house, of distant objects of interest or portions of the garden, may be framed by trees to create a more pleasing picture. As the view should always be more interesting than the frame, such trees should be chosen for their ability to "play second fiddle" gracefully. Average habit of growth and colour of foliage such as is found in maple, oak, elm and pine will prove most pleasing. More distinctive trees, such as Koster's blue spruce or weeping birch, should not be generally used in such situations as they create an anti-climax by attracting too much attention to themselves.

There are no trees used solely for the purpose of enframement in the plans under consideration as the lot is too small. Enframement in such properties is carried out by groups of shrubs, though in figure 3C the view of the back part of the garden from the terrace is framed by the pyramid cedar on the left and the Japanese lilac on the right. These are also dominant plants used to emphasize the promontories in the shrub border (see figure 8 which is a perspective drawing of figure 3C).



Fig. 8. A Perspective of Fig. 3C

# Specimens

Trees may be used as specimens or as accent points to emphasize the design of the garden. Trees used singly or in groups in such situations are chosen for distinctive characters, such as unusually attractive habit of growth as in Camperdown elm, weeping birch, pyramid cedar; colour of foliage as in Schwedler's Norway maple, golden cedar or copper beech; particular grace such as hemlock, or the fall brilliance of the leaves of red maple and red oak. These qualities, as well as the more obvious charm of abundant bloom or fruit as in the case of Japanese lilac or flowering crabs, make trees worth while as specimens.

On large properties such specimens are used as the dominant plants (see page 25) in boundary planting, standing out against the background of more sombre trees, marking the promontories of shrub borders, or as points of interest

to break up large expanses of lawn.

On small properties such as those shown in the plans space only permits the use of a few trees and these must be attractive as they are seen close at hand. Such trees may fulfill a dual purpose. The conifers behind the focal points in figures 3B and 3C are not only accent plants to emphasize design but may need to act as well as a screen for a garage or clothes pole on the neighbour's lot to the rear. Or such a tree may act as the focal point itself (figure 3) in which case it must be particularly attractive. Conifers are especially useful in such situations as they do not change from season to season whereas the artistic value of a deciduous tree is less constant.

Because of their size, trees will dominate these small gardens and so should be used only at strategic points in the planting scheme, such as corners, or the deep promontories of shrubbery (figure 3C). Usually their main purpose in a small garden is to provide shade from the hot afternoon sun, so that they must be placed accordingly. If we sit beneath them in order to get the benefit of this shade, they must be neat trees which do not litter up the ground beneath

with fruit or blossoms.

Conifers

The taller growing conifers are used in all the above ways and they and their more dwarf forms are also becoming more useful as the knowledge and appreciation of garden design increases in Canada. Because of their dense, evergreen, fine-textured foliage and because of their definite forms, conifers are the most solid appearing plant material at our disposal to build architectural form into our gardens. Using them as a framework to emphasize divisions and accent points heightens the impression that the garden and house are related. Because of their constant value this impression is held throughout the year.

As there are conifers of all sizes and shapes and as they stand clipping well, they may be used on properties of all sizes to bring out the interest of any sort of architectural line. The classic column is matched by the pyramid cedar or Swedish juniper while the spreading lines of Savin's or Pfitzer's juniper carry out to perfection the lines of a rambling cottage. The definite lines of good architecture can be brought out by the definite shapes of well selected conifers

planted at strategic positions (see figure 6).

Conifers have a more formal appearance than deciduous shrubs; that is why they are used as foundation planting material to go with the formality of

the design in figure 3B.

# CHAPTER VI—THE USES OF SHRUBS IN GARDEN PLANNING

In the previous general discussion we have seen that shrubs are used in four broad ways in the planning and planting of gardens:

Boundary Plantations

Partitions and Background Specimen or Accent Plants

Foundation Planting

To a considerable extent these uses of shrubs and the characteristics demanded by each use have already been discussed, but further discussion with the particular plans in mind may prove of assistance even at the risk of repetition.

Boundary Plantings

Boundary plantings are used to give privacy from the view of outsiders and to screen the view from within of unsightly objects on the outside. Also they tie the whole garden together to create a unity, and act as a background and frame for the garden displays.

In such plantings, where space permits, dense growth is required of sufficient height to shut off the view and at the same time proper variety in height is needed to render the skyline interesting. Frequently it is desirable to leave gaps or "vistas" in the planting, through which desirable views may be preserved of objects beyond the boundaries. As mass effect is desired shrubs are planted in groups of one variety rather than single plants of many sorts and such shrubs are chosen for their rapid growth, spreading habit and midgreen foliage rather than for distinctive features. Wherever bloom occurs it should be in large enough masses to be effective at the distance from which it will be seen. Bloom, of course, is always attractive but it is not so essential in such plantings as in parts of the garden where it will be seen in more detail.

On small city lots we cannot hope to secure complete privacy or to screen the view of all surrounding buildings. On many lots the boundary planting will take the form of a hedge as in figure 3A, or a fence on which climbers are grown. On other lots which are planted formally or informally boundary plantations are made up of groups of shrubs which not only back up the bright displays of the garden but to a great extent form the displays themselves.

Partition and Background

Such small lot boundary plantings really fall in the second class of "partition and barrier" plantings. The purpose of such plantings is to separate one garden area from another. Here, bloom and other distinctive features are important as the shrubs are closer to hand and consequently seen in more detail. Because these partitions and backgrounds are seen in elevation we must plan them with this in view and arrange them so that at maturity they will present the most pleasing composition. All well planned shrub groups will consist of the three classes of "dominant, interest and fillers" already discussed on page 19) (chapter IV) and will further be grouped according to harmony or contrast of foliage colour, texture and habit of growth as the desire may be.

In informal work the general rule for foliage colour is blend; in formal work, contrast. Bright colour is dominant and should be kept in the foreground, blending to mid-green, dark-green, blue-green and purpish-green in the back-ground. This gives the illusion of increased depth whereas the reverse tends to flatness.

The same applies to texture, which to a large extent means the coarseness and size of foliage and twigs. Coarse texture is dominant because it is seen in more detail and should be kept in the foreground where boldness is desired. Fine texture is seen in less detail and therefore appears to be at a greater distance. By planting coarse, bright foliage shrubs on the promontories and fine textured, dark leaved shrubs in the bays we can give greater emphasis to the curves of a border.

Habit of growth can also be used to create variety and interest. In general, shrub groups will be arranged with the lower growing sorts in the foreground and taller ones behind, but variety can be obtained and the outline of a border emphasized by planting tall, erect shrubs at the promontories and lower, more spreading shrubs in the bays.

In looking over figures 3B and 3C, the former being formal will be planted symmetrically, particularly the rose garden area. Each group of shrubs in the boundary plantation, which also acts as a background, and, on the left, as a partition between rose garden and kitchen garden, will need to be attractive because the property is small enough so that the shrubs can be seen in detail. It must also be matched by a corresponding group on the opposite side of the axis to preserve the symmetry. There may be slight differences, such as one finds between horticultural varieties or even species, provided these are not great enough to throw the garden off balance. For instance, two different varieties of lilacs of approximately the same colour could be used, the one single, the

other double, or a group of Deutzia Lemoinii could be planted opposite a mockorange of similar size, but if p.g. hydrangea were substituted for one group of lilacs and Van Houttei's spiraea planted instead of the mockorange the garden would appear unbalanced during the blooming seasons of these shrubs, as there would be a large mass of bloom on one side while there was green on the other, even though the shrubs match approximately in size and texture.

Also in figure 3B the adjacent shrub groups should be in greater contrast to each other in foliage and texture, with dominant groups at the corners, or flanking paths and marking central points to give emphasis to the design.

In figure 3C, which is planted informally, shrub groups should balance in weight of interest, but should not be planted so as to create symmetry. A group of lilacs on one side may balance a group of wayfaring trees on the other because they are similar in size, texture and blooming period; but a single plant of golden leaved mockorange, because of its bright foliage, could only be balanced by a much larger mass of green foliage. In the perspective sketch of this garden (figure 9) it will be noticed that the distinct shape of the pyramid cedar balances the much larger but less distinct mass of the Japanese lilac.

Bold planting on the promontories of erect, coarse textured, or bright foliaged shrubs will frame and give more interest to the picture of shrub groups or perennials planted in the bays, which will be particularly attractive at some season of the year. By progressive stages these bold promontories lead

our eye to the focal point at the end of the axis.

The large mass of shrubs on the promontory to the left (figure 9) completely shuts off the view of the rock garden from the terrace. If this were not so, the rock garden would dominate the whole garden picture and throw it off balance. As it is, one must progress to a point beyond the promontory before a sufficient view of the rock garden can be seen to dominate the herbaceous planting in the bay on the right-hand side of the garden. By this time our view to the rock garden's focal point of interest across the pool and the garden seat is at right angles to the main axis and becomes a cross axis to the garden. This new view of the garden should be arranged so as to balance on either side of this cross axis.

Specimen and Accent

Shrubs used as specimens or accent points in the garden lend emphasis to particular features of the design. When planted on either side of an entrance from one "room" to another, or when they mark the corners of beds they are seen in detail and must have some particularly good feature, such as bloom, foliage colour or habit of growth, to warrant the special position.

Specimen shrubs should not be scattered around indiscriminately where they will distract attention from the design and main features of the garden. The spotty planting of specimen shrubs so often seen creates confusion and defeats

the object of the garden.

In the plans under discussion, accent plants might be placed to good advantage on either side of the outdoor fireplace in figure 3A, on either side at the head of the two flights of steps in figure 3B, or on either side of the pool at the end of the main axis. On the cross axis through the rose garden in figure 3B, accent plants would be placed on either side of the path leading from the rose garden into the kitchen garden and at the end of the cross axis where it meets the right-hand border of the rose garden.

In figure 3C the dominant plants, such as the pyramid cedar on the left and the Japanese lilac on the right (see figure 9) are really accents, as are all strongly dominant plants. On a slightly larger place specimen shrubs might be planted in the lawn just off the promontories of the shrub border in the same

way as specimen trees are used on a large property.

Foundation Planting

The subject of foundation planting with shrubs has already been discussed in some detail in Chapter II (see page 13). On small properties groups of neat shrubs of average spreading habit of growth and mid-green foliage placed around the base of the house will help to build up from the horizontal ground line to the vertical lines of the building and soften the abrupt angles. Shrubs are much more valuable here than herbaceous plants as their appearance is more constant and permanent and their size more nearly matches that of the house.

From a study of the different plantings in front of the houses in figures 3, 3A and 3C it will be seen that these differ only in quantity, though they may also differ in material used. In general, planting is grouped around the entrance and at the corners to soften the angles. The size of these groups and the size of the shrubs in them will vary with the size of the house and the massiveness of its appearance. Small houses will require neat, small shrubs like Japanese barberry or dwarf Siberian pea; larger houses of stone or brick construction require larger shrubs, such as Tatarian honeysuckle or mockorange to match their appearance.

The minimum planting of one well chosen shrub on either side of the entrance and to mask each corner may prove of much better appearance than a belt of shrubs all around, over which the house must peek. When this skeleton planting is in place the owner may add to it as he sees fit by planting lower shrubs in the foreground to build up to those placed in the strategic positions. Such planting may be increased judiciously until the base of the house is completely hidden with tall shrubs at the corners and lower ones in front of them and beneath the windows.

This is the case in figure 3B where evergreens have been used in place of shrubs; taller ones at the corners and low spreading junipers in front of the window and around the base of the others. Evergreens are used in this case because they are more in keeping with the formal planting in the rear.

Wherever shrubs are planted in close proximity to each other it is advisable to plant them in solid beds rather than to have each shrub in a separate circle cut out of the sod. The latter creates a spotty appearance and requires more labour to maintain. Also it must be remembered that shrubs grow rapidly and should be planted from three to five feet apart according to size at maturity. Lilacs, Tatarian honeysuckle, etc., will need a circle of eight to ten feet at maturity and Van Houttei spiraea at least five feet.

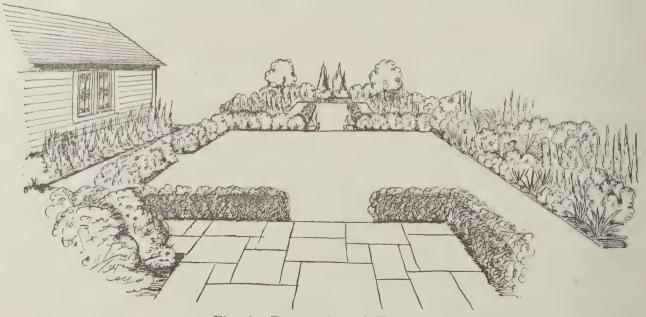


Fig. 9. Perspective of Fig. 3B

#### CHAPTER VII—THE USE OF CLIMBERS IN THE GARDEN

Climbing plants are used in four general ways in the development of gardens:—

As boundary plantings to give privacy

To screen unsightly objects

To provide shade

As a display of colour

# Boundary

On small properties climbers are often grown along the wire boundary fences to provide a screen of foliage that will give a measure of privacy. They are useful here, as they take up considerably less room than shrubs and so allow a wider border for the growing of perennial or annual flowers. Here attractive foliage is necessary in order to give a good background for the flowers in the border. Rapid, dense growth is also necessary to provide privacy, and, in order to secure coverage reasonably early in summer, it is imperative that such plants be hardy enough to carry the greater part of their wood through the winter in healthy condition. Attractive bloom is, of course, an advantage but not so necessary here, as the main object is for the climbers to form a background. Virginia creeper, moonseed and bittersweet are good examples in such situations.

#### Screen

The same plants are useful to provide a screen to hide unsightly objects, such as stumps, poles or fences; to screen a view of outbuildings or compost piles. Where climbers are used to cover bare or unattractive wall areas, however, the need is for a self-clinging, hardy growth that requires little attention. The Boston ivy is our best climber for covering masonry walls wherever it is hardy, but Engleman's ivy is hardy over a wider section of the country.

Every wall of a house should not be covered with ivy indiscriminately. There is nothing to be gained by covering an architecturally attractive wall space and even bare ones are broken up to better advantage by a branch or two of ivy running across them, than by a solid expanse of foliage. Nor should old stumps and poles be left in the garden just as an excuse to grow a climber. Though hidden, the presence of these objects is still recognized. Covering them merely renders their presence less objectionable.

#### Ground Cover

The use of ground covering climbers comes under this second class of screen plantings. Sometimes it is difficult or monotonous to cover banks with grass; or desirable to provide a more interesting ground cover than grass beneath trees or shrubs. Such plants need to be hardy at least when covered by snow, of neat foliage and frequently are more attractive when the foliage is shiny or distinctive in some other characteristic. Euonymus vegeta, periwinkle and pachysandra are good examples. Often on an open bank rambler roses can be grown to good advantage and make an excellent show when in bloom.

#### Shade

To provide shade, climbers are used as covering for pergolas, porches and garden shelters. In such situations they are usually close to the family activities and tidiness is a prime consideration. Also we require good circulation of air so that growth must not be so dense as to shut off the breeze. Such plants must be hardy enough to survive our winters and be able to provide shade in June. Freedom from insects is also an advantage.

The large, attractive foliage and fairly open growth of Dutchman's pipe is excellent for this purpose. Moonseed is also good. Climbing honeysuckles are very attractive but need more attention to keep them from growing too thick.

Display

Where climbers are used to provide a display of colour, bloom is, of course, the most important consideration. Climbing roses and the late blooming varieties of clematis are the best Canadian examples. Neither is really a climber as each requires tying to trellises or supports.

Such supports and plants because of their outstanding appearance must be used as specimen or accent plants to be effective. They are used (1) to mark entrances as on arches, on the pillars of pergolas; (2) at strategic points in perennial or annual borders; (3) to mark the end of minor axes, or (4) by repetition at regular intervals along a formal border or path to carry the eye by progression to some focal point in the distance.

In order to secure good bloom in most parts of the country, severe pruning is necessary in the spring; so that such plants cannot be used as screen planting or to provide shade.

# CHAPTER VIII—THE USE OF ROSES IN THE LANDSCAPE

Because of its universal popularity the rose has always held an intimate place in our gardens. When we recall roses, it is usually ones which were planted along paths where we have strolled or ones which climbed over a pleasant garden shelter.

Garden roses, such as the Hybrid Teas, Hybrid Perpetuals or the two types of Polyantha, have not an attractive habit of growth. They are, therefore, used to best advantage massed together in solid beds where their beauty of bloom may make the greatest show. This method of cultivation also suits their disposition as most of them refuse to grow vigorously in competition with other shrubs. Sometimes low plants, such as violas may be planted between the roses to act as ground cover to shade the roots and act as a foil of contrasting colour to set off the beauty of their blooms. Also, as we shall see later, the garden roses need a rather special site and care, so that they are best used in separate beds or gardens specially developed for them.

On small properties no special garden can be set aside for roses but a separate bed or beds should be provided. These beds will show to best advantage when they border paths, or are symmetrically arranged on either side of the main garden axis (figure 3B). Under no circumstances should garden roses be planted in a border among other plants.

Where space permits, a separate garden for roses is of constant interest, and for this reason we prefer to have it close to the house or easily accessible by means of a garden path. Because of its association with the house the rose garden should be of a formal nature with the beds arranged symmetrically on either side of an axis of the garden. This axis is really the main line of view from some window or door of the house, from which the garden appears to best advantage. Thus the garden is brought into unity with the house.

Sometimes no suitable site for the growing of roses exists near the house. In such a case the garden is placed at the end of a path leading from the house, or at the end of an axis running from the house through some other part of the grounds as in figure 3B.

A garden of such a formal nature should be closed in from the rest of the grounds. A surrounding plantation of shrubbery also sets off the appearance of the roses and increases the feeling of intimacy and restfulness. Such an enclosure suits the roses as it tends to hold the snow and to reduce the force of the wind in winter. The enclosure, however, must not be so dense as to prevent circulation of air.

Site

The site of such a garden should be level, as a formal arrangement of beds will not look well on ground which slopes too obviously. Where other conditions are suitable, the ground may be levelled by grading and the difference in grade made up by the use of a dry stone wall with steps. Such a difference in level is very attractive.

Air

The rose garden should be sheltered from prevailing winds of winter by the house, or a belt of planting. But, as has been previously mentioned, there must be free circulation of air. If this is not the case, mildew and other foliage diseases will abound. In order to avoid early frosts in the fall, it is advisable to arrange the garden so that the ground slopes away from it.

Sun

Roses require full or almost full sunshine to give best results. The garden must be placed with this in view. A little shade at midday, if possible, will enable the blooms to last longer, but this is difficult to arrange. Roses will not succeed where they have to compete with trees for food, moisture or sunlight.

In general, we may say then that garden roses prefer a level spot on a

south or east general slope which is protected from the prevailing winds.

Soil

Roses like a clay loam soil and this should be kept in mind when the site is chosen. Climbing roses are used in many ways. In the rose garden itself they may be used as part of the enclosure on trelliage or pergolas, or to cover garden shelters. Also they may act as accent points in the design when trained

on pillars or arches.

In other parts of the grounds those of the rambler type may be used to make a solid mat on banks or to cover arches. Pillar roses may be used on posts at regular intervals along paths or drives. Climbers may be used, where climate permits, to cover walls and fences, but wherever they are used one must be sure to provide free air circulation. Even when supported on a trellis they must not be placed close to a wall from which much heat will be reflected or they will suffer from foliage diseases and insects.

# Use of Shrub Roses

Roses of this type are rapidly gaining in popularity and deserve much more prominence in Canadian gardens than they have been given previously. Recently a number of new hybrids have been developed in Canada and the northwestern states from natural species, which are valuable additions to the shrub lists. The usefulness of such roses is chiefly in the shrub border, where many of them give a longer period of bloom than most flowering shrubs. The various shades of foliage and the highly coloured fruits in autumn make them useful subjects for massing in the shrub border and they are particularly well set off by a background of evergreens. Like the garden roses they require lots of sun and free circulation of air. As a class they are much hardier and need no protection. They fit excellently into the shrubbery border around the rose garden, or massed on gentle sloping banks.

# CHAPTER IX—THE USE OF HERBACEOUS PLANTS

So far consideration has been given mainly to woody plant materials, trees, shrubs and vines. These are more or less permanent and provide substance and shape to the garden. They form the walls and the more substantial furniture. Size, habit of growth and texture were the chief points of consideration.

From herbaceous plants—perennials, annuals, spring bulbs, etc.—we obtain the really bright displays of colour that liven up the garden picture and give variety from month to month.

Herbaceous perennials are used in wide beds or borders along the boundaries of garden areas. Looking back over the past discussion and illustrations it will be seen that flower borders in most cases are backed up by shrubs or other background. Except in the example of formal work (figure 3B) the borders all form the foreground of boundary plantings. Sometimes perennials are used in narrower beds flanking paths or drives, as is the case in the border which separates the path to the kitchen garden from the main lawn in figure 3B., Perennials are rarely used in symmetrically arranged beds in a formal garden, as few of them have a sufficiently long period of bloom to render them useful in a situation where values need to be fairly constant.

The chief attraction lies in the colour of their flowers and in some cases the colour of their foliage, though form and texture also have a part. For this reason, herbaceous plants are used in the composition of the landscape in the same way that bright colours are used in any other form of decoration. They may be planted so as to give definite colour schemes in contrast, harmony or gradation. It must be kept in mind that the purpose of the perennial border is to provide an interesting show of colour from spring to fall. For best effects, therefore, we may disregard the border's efficiency as a botanical collection, interesting though this may be to the trained plantsman. Too much variety—the dotting in of single plants—will create confusion and spoil the effect of the garden as a whole.

Perennial borders may be of any width over three feet but a true mixed perennial border should be at least six feet in width in order to provide sufficient space for a good variety of plants of different heights that will give continuous bloom throughout the season, (see plan figure 11).

If space does not permit a border as wide as this (as is the case in figure 3A) a few well chosen kinds of plants should be used in large quantities to provide five or six good shows of colour throughout the summer. Each kind should be spaced at fairly regular intervals throughout the border's length so that when it is in bloom, the show will be distributed fairly evenly or massed at certain accent points. Colour in such a border should be graded with the dull and pastel shades near at hand and the strongest colours in the distance.

For instance, a narrow border could start in spring with large clumps of spring bulbs planted all through it with the purples and pastels nearest the house and the yellow, orange and scarlets in the distance. As these fade their place could be taken by clumps of irises planted along the whole border at more or less regular intervals. Here we have a range of colour to suit anyone's taste in contrast or graded harmony. Peonies take up the torch as irises fade and we have had a continuous parade of colour from these three sorts from early May until Dominion Day. The next big show will come from phlox planted in quantities at the back of the peonies. Phlox have a nasty habit of catching

foliage diseases and showing bare legs when they are in flower, so that it is well to place them back of some plant such as peony which has attractive foliage throughout the year. The phlox, however, will not give much of a show until the middle of July so that other plants must be used as fillers. Peachleaf bellflower (Campanula persicifolia) coreopsis, gaillardia and shasta daisy are all good for this period and may be used in quantity, planted near and in front of the iris clumps, because iris foliage usually needs hiding in late summer. The phlox will steal the show all through July and August and may be followed in September by Helenium and Michaelmas Daisies. The accompanying plan in figure 10 shows how such a border may be planted.

If space permits the border to be made wider, other groups of plants are put in. A foreground of low spreading mats of colour may be planted in front of tall masses of delphinium to back up the peony display, etc. As width can be increased, we add more plants until we find ourselves with enough room to have a truly mixed herbaceous border.

Broad, mixed herbaceous borders are usually used along the boundaries of large lawns or on either side of a broad grassy path leading from one section of the garden to another. They are more or less informal and aim to create charm by the effective arrangement of plants so as to obtain a series of pleasing colour groups as one's eye travels along the border. The size of these groups that is, the number of plants involved in each-will depend on the size of the border and the distance at which it will most often be viewed. As we pass along a path looking at a border immediately flanking it, a single clump of shasta daisy or iris with perhaps a dozen blooms will create a sufficient display, whereas if we usually see the border across an expanse of lawn it may require fifty or more blooms of the same variety to create a similar effect. For the same reason plants with strong colours—scarlet, yellow and pure white—do not need to be planted in such large clumps to give a mass effect as do those of pastel shades or dark colours. Dark colours or small flowers do not show up at a distance to good advantage so must be planted in larger quantities or close at hand.

In a broad, mixed border which is to be seen at a distance as a whole, some thought should be given to a general gradation or harmony from end to end. If the colours are all mixed up the effect at a distance will be confused and indistinct. If, however, the general effect is a pleasing gradation from scarlet to orange, yellow, blue, indigo, violet, our eye recognizes the logical progression of the general impression. As we approach the border, it breaks up into smaller groupings. Among the mass of scarlets there will be blues, and with the yellows, clumps of lavender and mauve.

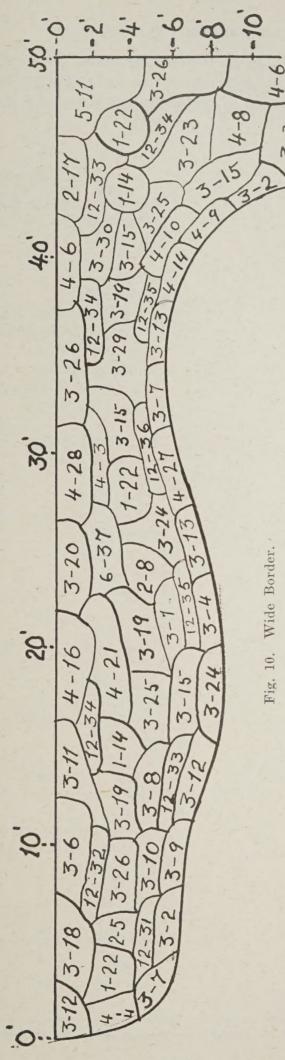
Form and texture also help in securing interesting variety. While the general rule for colour, form and texture should be harmony, contrast is necessary in order to break monotony. As well as contrast of colour in the small groups, contrast of form and texture will also be pleasing. Large groups of round-headed plants, such as coreopsis or gaillardia will look better if backed up by the tall spikes of thermopsis (contrast of form) or of veronica (contrast of form and colour). Lilies will, because of their size, create a very strong note in any border. The regals will look well surrounded by the contrasting fine texture of gypsophila while the blazing orange-scarlet of Willmottiae or hybrids of similar colour will be softened by the contrasting texture and colour of Chinese delphinium.

The height arrangement of plants also helps to lend interest. In general, low plants will be placed at the front of a border and height will grade up toward the back. Yet often, as with shrubs, bold effects can be secured by placing taller plants toward the front to give emphasis to promontories, or to divide one group from the next—to act as a picture frame. Curves and bays in a border may be emphasized by low growing plants; promontories accented by taller ones.

Thought must also be given to blooming season and special characteristics of plants. Middle height plants, such as irises and oriental poppies, bloom quite early when their flowers are well above the tops of almost all perennials. For this reason they may be placed towards the back of the border. Here the bloom will be seen in season and the added advantage is gained by having their midsummer foliage, which is dead looking, hidden to view by tall growing plants.

Careful planning assists in arranging a border but even the most careful arrangement does not satisfy the gardener, who loves to shift plants around to try new combinations of colour, texture and habit of growth. Each year brings new favourites and added experience; each shows improvements that can be made. That is why people like gardening.

# PLANS FOR PERENNIAL BORDERS



See planting key on following page for number of plants. The first numeral denotes the number of plants in each group. The second keys the name of the plant.

-	2		-14
50	2-34 2-11	1-19 12-32	3-10 12-33
	2-11 12-34 2-26 12-34 3-16 12-34 2-6 12-34 2-26 12-34 2-11	12-324-19 12-32 2-30 12-32 1-22 12-32 2-30 12-32 4-19 12-32	9 12-353-15 12-36 3-10 12-33 3-9 12-35 3-15 12-36 3-10 12-33
40	-34 2-6 12	-22 12-32 2-	3-9 12-35
	-34 3-16 12	-30 12-32 1-	3-10 12-33
30	-34 2-26 12.	-19 12-32 2	13-15/12-36
20,	12-34 2-11 12	3-8 12-324	-33 3-9 12-38
2	5 12-34 2-26	32 3-8 12-32	12-36 3-10 12.
10,	12-34 2-26 12-34 3-16 12-34 2-6 12-34 2-26 12-34	1-22 12-32 2-30 12-32 4-19 12-32 3-8 12-32 3-8	12-36 3-10 12-33 3-9 12-35 3-15 12-36 3-10 12-33 3-
	6 12-34 3	2 2-30 12	2-33 3-9
	12-34 2-2	1-22 12-3	12-36 3-10 11

Fig. 11. Narrow Border.

# PLANTING LIST FOR PERENNIAL BORDER 60 FEET LONG

The first number in each space in plan of border represents the number of plants in group; the second number is the key number to the following list, for example: 6-10 means that 6 Hollyhocks are in the group, 10-6 denotes 10 bulbs of Lilium regale.

Key No	Botanical Name	Common Name
1	Aster n-a. Climax	Michaelmas Daisy—Pink
2	Helenium Riverton Gem	Sneezeweed
3	Delphinium hybridum	Tall larkspur
4	Lavatera cashmeriana	
5	Phlox paniculata-Viking	Tall phlox—red
6	Helenium Chippersfield Orange	Sneezeweed
7	Aster Beechwood Challenger	Michaelmas Daisy—red
8	Helianthus Lodden Gold	Double perennial sunflower
9	Phlox pan. Coquillicot	Tall phlox—scarlet
10	Althea rosea fl. pl.	Double hollyhocks
11	Heliopsis incomparabilis	Double false sunflower
12	Paeonia spp. Therese	Peony-pink
13	Lupinus polyphyllus	Lupin
14	Phlox pan. Daily Sketch	Phlox—shell with rose eye
15	Iris germ.—Mary Geddes	Garden iris—blend
16	Lilium regale	Regal lily
17	Aquilegia 1. sp. hybrid	Columbine
18	Campanula persicifolia Mrs. Harrison	Peachleaf bellflower
19	Anthemis Sancta Johannus	Stink-weed
20	Papaver orientale	Oriental poppy
21	Hemerocallis J. A. Crawford	Daylily
22	Paeonia spp. Cherry Hill	Peony—red
23	Lilium princeps	
24	Lychnis chalcedonica	Fiery cross
25	Aster amellus King Edward VII	Michaelmas Daisy—blue
26	Chrysanthemum max. Esther Read	Shasta Daisy—double
27	Gaillardia gf. Bergundy	Blanket flower
28	Gypsophila Bristol Fairy	Baby's breath
29	Iris germ. Alice Aileen	Garden iris—pale blue
30	Linum perenne	False flax
31	Dianthus plumarius	Garden pink
32	Arabis albida rosea	Rockcress—rose pink
33	Papaver nudicaule	Iceland poppy
34	Thymus serpyllum	Thyme
35	Oenothera frut. Fraseri	Evening primrose
36	Campanula carpatica	Carpathian bellflower
37	Lychnis Haageana	Fiery cross
38	Phlox subulata Vivid	Moss pink
39	Gypsophila repens	Baby's breath—drawf
40	Nepeta Souvenir d'Andre Chaudron	Catnip
41	Iris germ. Daffodil	Garden iris—yellow
42	Coreopsis lanceolata gf.	Tickseed
D	Daffodils	
T	Darwin or Cottage Tulips	



